JAMES F. SPANN
Chief Scientist, NASA MARSHALL SPACE FLIGHT CENTER

EDUCATION

Ph.D., Physics	University of Arkansas, Fayetteville, Arkansas	1985
B.S., Physics and Mathematics – Cum Laude	Ouachita Baptist University, Arkadelphia, Arkansas	1979
High School	Escola Americana do Recife, Brazil	1975

PROFESSIONAL EXPERIENCE:

2015 – Present, Chief Scientist, MSFC Science and Technology Office, Marshall Space Flight Center, Huntsville, AL

- **Scintillation Prediction Observation Research Task (SPORT) CubeSat, Principle Investigator -** Leads the mission and is responsible for overall investigation success, including technical, budget, programmatic, and science components, including direct interface with Brazil INPE and DCTA/ITA.

2005 – 2015, Manager of the Science Research Office, Marshall Space Flight Center, Huntsville, AL (formerly Science and Exploration Research Office)
2008 – 2015, Member of the Magnetospheric Multiscale (MMS) Mission Standing Review Board
2004 – 2005, Deputy, Space Science Branch, Marshall Space Flight Center, Huntsville, AL
2002 – 2004, Space Physics and Plasma Group, Marshall Space Flight Center, Huntsville, AL
2000 – 2002, Heliophysics Discipline Scientist, NASA Headquarters, Washington, DC
1986 – 2000, Space Physics and Plasma Group, Marshall Space Flight Center in Huntsville, AL

- Established and maintained Ultraviolet Instrumentation Laboratory and Dusty Plasma Laboratory
- Co-I on Polar Ultraviolet Imager (UVI), responsible for testing, calibration, launch preparedness and operations
- Participating Scientist on IMAGE, responsible for testing and calibration of FUV WIC camera

1984 - 1986, Oak Ridge Associated Universities Post Doctoral Fellow, U.S. Dept. of Energy in Morgantown, WV

- Established laboratory to study response of coal slurry droplets to intense heating with lasers

COMMITTEE MEMBERSHIPS AND AWARDS

Service

2016 Space Weather Action Plan, Benchmarks for Ionospheric Disturbances Phase Team
2016 NOAA Independent Study Team for the Space Weather Forward Observatory
2015 Agency Competition Study team member
2015 OSTP National Plan for Civil Earth Observations, Space Weather Societal Benefit Area Team
2014-2015 NASA Technology Roadmap TA08: Science Instruments, Observatories, and Sensor Systems team
2012-2013 NASA Co-Chair of the National Space Weather Program Committee on Space Weather
2009 Co-Chair of the Heliophysics Roadmap
2008-2015, Member of the Magnetospheric Multiscale (MMS) Mission Standing Review Board
2007 Chair of the Heliophysics Science and the Moon Report
2003-2007 LWS Management Operations Working Group

Honors and Awards

NASA Silver Achievement Medal - Group (2015)
NASA Distinguished Service Medal (2013)
NASA Outstanding Leadership Medal (2010)
MIT Sloan School of Management Executive Certificate in Management Leadership (2010)
MSFC Director's Commendation Award (2003, 1995)
GSFC Group Achievement Award for work on IMAGE (2001)
NASA/HQ Professional Development Program (2000-2001)
MSFC Special Service Award (1998, 1992, 1991, 1990, 1989)
GSFC Group Achievement Award for work on Polar UVI (1998)
MSFC Group Achievement Award for work on Polar UVI (1996)
NASA Group Achievement Award for work on the HST Special Problem Resolution Team (1991)
Ouachita Baptist University Outstanding Senior, Junior Physics Major (1979, 1978)

Students Thesis/Dissertation

Catherine C. Venturini, A Dusty Plasma Laboratory Experiment, MS Physics, University of Alabama in Huntsville, 2000
Anna D. DeJong, Studies of Magnetospheric Convection: Balanced and Unbalanced, PhD Atmospheric and Space Sciences, University of Michigan, 2008

Selected Publications (from >70)

1. Spann, J., and T. Moore (2017), Measurement Techniques in Solar and Space Physics, *J. Geophys. Res. Space Physics*, 122, 1437–1438, doi:10.1002/2017JA023888.
2. Abbas, M. M., D. Tankosic, A. LeClair, and J. F. Spann, Charging of dust grains in astrophysical/planetary environments, *ApJ*, 756, 41 , 2012.
3. Gonzalez, Walter, D. Sibeck, J. Spann, Influence of Solar Activity on Interplanetary and Geophysics Phenomena, Special Issue Guest Editor, *JASTP*, 73/11-12, 2011.
4. Abbas, M. M., D. Tankosic, P. D. Craven, A. LeClair, and J. F. Spann, Lunar Dust Grain Charging by Electron Impact: Complex Role of Secondary Electron Emissions in Space Environments, *ApJ*, 718, 795 , 2010.
5. Donovan, E., T. Trondsen, J. Spann, W. Liu, E. Spanswick, M. Lester, C.-Y. Tu, A. Ridley, M. Henderson, T. Immel, S. Mende, J. Bonnell, M. Syrjäsuo, G. Sofko, L. Cogger, J. Murphree, P.T. Jayachandran, T. Pulkkinen, R. Rankin and J. Sigwarth, Global auroral imaging in the ILWS era, Advances in Space Research Volume 40, Issue 3, 2007, Pages 409-418
6. DeJong, A. D., X. Cai, R. C. Clauer, and J. F. Spann, Auroral and open magnetic flux during isolate substorms, sawteeth, and SMC events, *Ann. Geophys.*, 25, 1865, 2007
7. Spann, J, F., Compact FUV camera concept for space weather applications, *Proc. of SPIE*, Vol. 5901, 5901H-1, 2005
8. Chua, D., G. Parks, M. Brittnacher, G. Germany, J Spann, Aurora substorm timescales: IMF and seasonal variations, *J. Geophys. Res.,* 109, A03207, doi:10.1029/2003JA009951, 2004
9. H.U. Frey, S.B. Mende, T.J. Immel, J.-C. Gerard, B. Hubert, S. Habraken, J. Spann, G.R. Gladstone, D.V. Bisikalo, V.I. Shematovich, Summary of quantitative interpretation of IMAGE far ultraviolet auroral data, *Space Science Reviews,* 109, 255-283, 2003
10. Cumnock, J. A., J. R. Sharber, R. A. Helis, L. G. Blomberg, G. A. Germany, J. F. Spann, and W. R. Cowley, Interplanetary magnetic filed control of theta aurora development, *J. Geophys. Res.,* 107, 10.1029/2001JA0009126, 2002
11. Spann, J. F., M. M. Abbas, C. C. Venturini, and R. H. Comfort, Electrodynamic Balance for Studies of Cosmic Dust Particles, *Physica Scripta,* T89, 147-153, 2001
12. S. Mende, H. Heetderks, H. Frey, M. Lampton, S.P. Geller, J.F. Spann, Jr., H. Dougani, S. Fuselier, S. Murphree, Far Ultraviolet Imaging from the IMAGE Spacecraft: 2. Wideband FUV Imaging, *Space Science Reviews, 91,* 271-285, 2000